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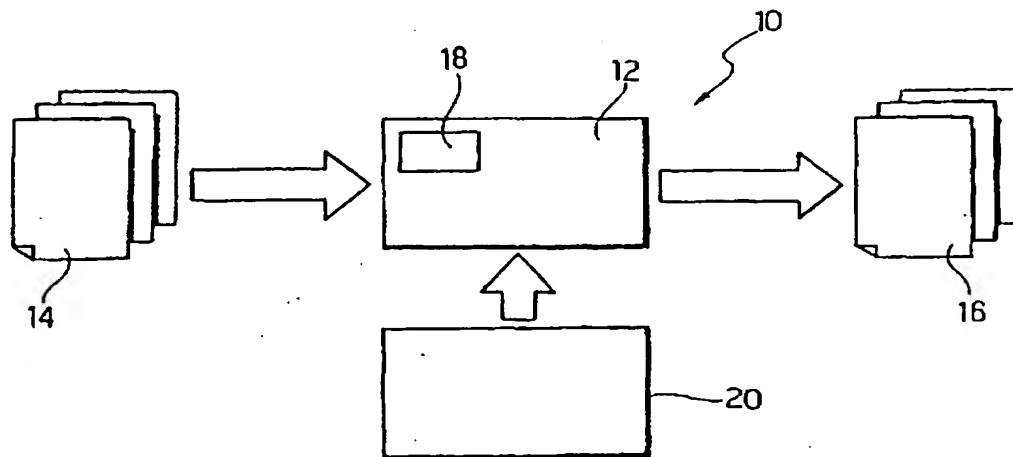
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[Continued on next page]

(54) Title: METHOD FOR DECODING CHARGING DATA RECORDS IN MOBILE TELEPHONE NETWORKS AND THE RELATIVE SYSTEM



(57) Abstract: The invention relates to the decoding of charging data records (CDR) generated in a mobile telephone network. These records consist of files to be decoded that can be described on the basis of a formal description of the ASN.1 type. On the basis of: i) a description of the type of record to be decoded corresponding to at least a first type (GSM) and at least a second type (GPRS) of records to be decoded, and on the basis of ii) said formal description of the type ASN.1 of the records to be decoded, an interpreter of the ASN.1 type (18) self-generates an updated version of decoder (10) of at least a first and at least a second type according to the type of record to be decoded. The files to be decoded are sent to the decoder created in this way, so as to output the decoded CDR records in text format.

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**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 00 59199 A (CANAVAN ANGELA ROSE ; GAULT WILLIAM JAMES (GB); ANDERSON SAMUEL (GB) 5 October 2000 (2000-10-05) page 6, line 23 -page 9, line 8 page 14, line 8 -page 15, line 9 ---	1-5
Y	US 6 134 307 A (HAKL SHAWN PAUL ET AL) 17 October 2000 (2000-10-17) column 4, line 35 -column 5, line 46 ---	1-5
A	US 2001/040947 A1 (GEISBUSCH FERDINAND ET AL) 15 November 2001 (2001-11-15) page 2, line 15 - line 18 page 3, line 21 - line 24 ---	1-5
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 99 09733 A (TELIA AB) 25 February 1999 (1999-02-25) page 6, line 5 -page 14, line 5 page 28, line 4 -page 30, line 5 -----	1-5

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/01978

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0059199	A	05-10-2000	AU 3312600 A CA 2363430 A1 EP 1163791 A1 WO 0059199 A1	16-10-2000 05-10-2000 19-12-2001 05-10-2000
US 6134307	A	17-10-2000	NONE	
US 2001040947	A1	15-11-2001	DE 10000825 A1 CN 1311603 A EP 1119174 A2 JP 2001292253 A	19-07-2001 05-09-2001 25-07-2001 19-10-2001
WO 9909733	A	25-02-1999	SE 512479 C2 EE 200000084 A EP 1013067 A1 NO 20000643 A SE 9702937 A WO 9909733 A1	20-03-2000 16-10-2000 28-06-2000 12-04-2000 15-02-1999 25-02-1999